



09/38/295



ATTORNEYS AT LAW

Docket No.: 0057-2521-0 PCT

COMMISSIONER FOR PATENTS
ALEXANDRIA, VIRGINIA 22313

RE: Inventor: Shigeru AIHARA, et al.
Patent No.: 6,811,928 B2
Issued: November 2, 2004
Group Art Unit: 1745
Examiner: Tracy Mae Dove
For: BATTERY WITH ADHESION RESIN LAYER
INCLUDING FILLER

Certificate
NOV 23 2004
of Correction

SIR:

Attached hereto for filing are the following papers:

REQUEST FOR CERTIFICATE OF CORRECTION
CERTIFICATE OF CORRECTION FORM PTO 1050
COPY OF PCT PUBLISHED INTERNATIONAL APPLICATION

Our check in the amount of \$0.00 is attached covering any required fees. In the event any variance exists between the amount enclosed and the Patent Office charges for filing the above-noted documents, including any fees required under 37 C.F.R 1.136 for any necessary Extension of Time to make the filing of the attached documents timely, please charge or credit the difference to our Deposit Account No. 15-0030. A duplicate copy of this sheet is enclosed.

Respectfully submitted,

OBLON, SPIVAK, McCLELLAND,
MAIER & NEUSTADT, P.C.
Norman F. Oblon

Corwin P. Umbach, Ph.D.
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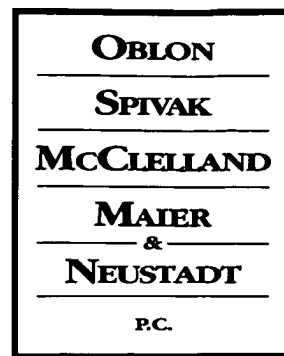
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DEC 2004



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DOCKET NO.: 0057-2521-0 PCT/ele



IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

IN RE APPLICATION OF: Shigeru AIHARA, et al.

PATENT NO.: 6,811,928 *B2*

GROUP: 1745

ISSUED: November 2, 2004

EXAMINER: Tracy Mae Dove

FOR: BATTERY WITH ADHESION RESIN LAYER INCLUDING FILLER

REQUEST FOR CERTIFICATE OF CORRECTION

DIRECTOR OF THE UNITED STATES PATENT AND TRADEMARK OFFICE
ALEXANDRIA, VA 22313-1450

SIR:

The following is a request for a certificate of correction in Serial Number 09/381,295, now Patent Number 6,811,928.

In accordance with the provisions of Rule 322 of the Rules of Practice, which implement 35 USC 254, the Patent Office is respectfully requested to issue a certificate of correction in the above-identified patent.

In light of the fact that the errors were the fault of the Patent Office, no fees are required. The requested corrections are listed on FORM P.T.O. 1050.

Respectfully submitted,

OBLON, SPIVAK, McCLELLAND,
MAIER & NEUSTADT, P.C.
Norman F. Oblon

Corwin P. Umbach, Ph.D.
Registration No. 40,211

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3 DEC 2004

UNITED STATES PATENT AND TRADEMARK OFFICE
CERTIFICATE OF CORRECTION

PATENT NO. : 6,811,928 *B2*
DATED: Nov. 2, 2004
INVENTOR(S): Aihara, et al.

It is certified that an error appears in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

On the title page, Item (87), the PCT Published Date is incorrect. Item (87) should read:

-- (87) PCT Pub. No.: WO99/38224

PCT Pub. Date: Jul. 29, 1999 --

Mailing address of sender:

Customer Number
22850

Tel. (703) 413-3000
Fax. (703) 413-2220
(OSMMN 03/02)

Patent No. 6,811,928

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UNITED STATES PATENT AND TRADEMARK OFFICE
CERTIFICATE OF CORRECTION

PATENT NO. : **6,811,928 ~~B2~~**
DATED: **Nov. 2, 2004**
INVENTOR(S): **Aihara, et al.**

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Patent No. **6,811,928**

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3 DEC 2004



PCT

特許協力条約に基づいて公開された国際出願

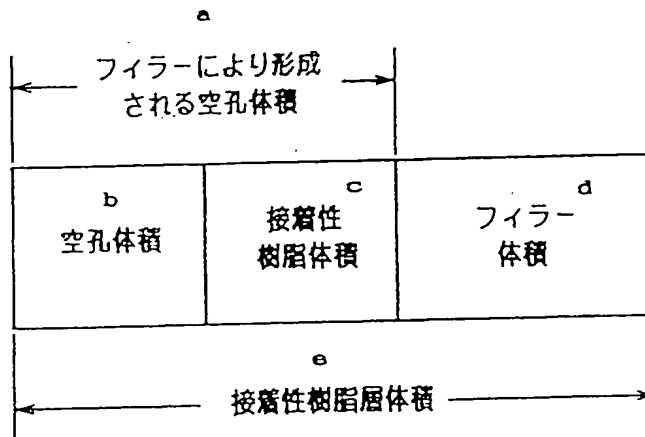
<p>(51) 国際特許分類 H01M 10/40, 6/06, 6/14, 6/18, 10/30</p>	<p>A1</p>	<p>(11) 国際公開番号 WO99/38224</p> <p>(43) 国際公開日 1999年7月29日 (29.07.99)</p>
<p>(21) 国際出願番号 PCT/JP98/00248</p> <p>(22) 国際出願日 1998年1月22日 (22.01.98)</p> <p>(71) 出願人 (米国を除くすべての指定国について) 三菱電機株式会社 (MITSUBISHI DENKI KABUSHIKI KAISHA)[JP/JP] 〒100 東京都千代田区丸の内二丁目2番3号 Tokyo, (JP)</p> <p>(72) 発明者 ; および (75) 発明者 / 出願人 (米国についてのみ) 相原 茂(AIHARA, Shigeru)[JP/JP] 竹村大吾(TAKEMURA, Daigo)[JP/JP] 塩田 久(SHIOTA, Hisashi)[JP/JP] 荒金 淳(ARAGANE, Jun)[JP/JP] 漆畑広明(URUSHIBATA, Hiroaki)[JP/JP] 吉田育弘(YOSHIDA, Yasuhiro)[JP/JP] 濱野浩司(HAMANO, Kouji)[JP/JP] 村井道雄(MURAI, Michio)[JP/JP] 犬塚隆之(INUZUKA, Takayuki)[JP/JP] 〒100 東京都千代田区丸の内二丁目2番3号 三菱電機株式会社内 Tokyo, (JP)</p>		<p>(74) 代理人 弁理士 宮田金雄, 外(MIYATA, Kanco et al.) 〒100 東京都千代田区丸の内二丁目2番3号 三菱電機株式会社内 Tokyo, (JP)</p> <p>(81) 指定国 CN, JP, KR, US, 欧州特許 (AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE)</p> <p>添付公開書類 国際調査報告書</p>

(54)Title: BATTERY

(54)発明の名称 電池

(57) Abstract

The conventional battery has such a problem that the size of the battery is not able to be reduced, because the battery must use a solid can to maintain the electrical connection between its electrodes. In such a battery in which each electrode is joined to a separator with an adhesive resin, in addition, the adhesive strength between the electrodes and a separator and the characteristics of the battery, particularly, the ion conductivity and internal resistance of the battery act as contradictory to each other. In order to solve these problems, the characteristics of the battery are enhanced by reducing the resistance between electrodes, namely, the internal resistance of the battery, while the insulating function to the electronic conduction between both electrodes and the ion conductivity are compatible with each other and, in addition, the weight, size, and thickness of the battery are reduced while maintaining the adhesive strength between both electrodes, so that the electrodes can be joined firmly to each other. The internal resistance of the battery is reduced by joining the anode and the cathode to each other with an adhesive resin layer provided at least with one filler-containing adhesive resin layer and, in addition, the characteristics of the battery are improved and the adhesive strength between the electrodes is maintained by forming the adhesive resin layer in a porous layer, so that the pores of the resin layer can be filled up with an electrolytic solution and the resin layer can have sufficiently high ion conductivity.



- a ... volume of pores formed of filler
- b ... volume of pores
- c ... volume of adhesive resin
- d ... volume of filler
- e ... volume of adhesive resin layer